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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,800	11/14/2003	Yukiyoshi Sunada	CH2893	4196

23906 7590 11/03/2006

E I DU PONT DE NEMOURS AND COMPANY  
LEGAL PATENT RECORDS CENTER  
BARLEY MILL PLAZA 25/1128  
4417 LANCASTER PIKE  
WILMINGTON, DE 19805

EXAMINER
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MIGGINS, MICHAEL C

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

<b>Office Action Summary</b>	<b>Application No.</b> 10/713,800	<b>Applicant(s)</b> SUNADA ET AL.	
	<b>Examiner</b> Michael C. Miggins	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/13/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

#### **REJECTIONS WITHDRAWN**

1. All of the 102 and 103 rejections set forth in the non-final rejection of 4/14/06, pages 2-5, paragraphs 2-5.

#### **REJECTIONS REPEATED**

2. There are no rejections repeated.

#### **NEW REJECTIONS**

##### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diaz et al. (EP 0 195 292, cited by applicant) in view of Iwato et al. (WO 01/90267, cited by applicant).

Diaz discloses a conduit having its surface or a portion of its surface coated with a fluid repellent layer wherein said layer comprises, or is produced from, a fluorocarbon silane, wherein said conduit is a nozzle (column 1, lines 28-65) (applies to instant claims 1-2).

Diaz fails to disclose an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane has the formula  $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$ ; said silicon compound is a silicate or an organoalkoxy silane;  $R_f$  is a  $C_{3-18}$  perfluoroalkyl group or combinations of two or more thereof; each  $R^1$  is independently one or more  $C_{1-3}$  alkyl groups;  $p$  is 2 to 4; and  $n$  is 2 to 10, wherein the surface is metal or ceramic.

Iwato discloses an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane has the formula  $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$ ; said silicon compound is a silicate or an organoalkoxy silane;  $R_f$  is a  $C_{3-18}$  perfluoroalkyl group or combinations of two or more thereof; each  $R^1$  is independently one or more  $C_{1-3}$  alkyl groups;  $p$  is 2 to 4; and  $n$  is 2 to 10, wherein the surface is metal or ceramic (page 2, lines 22-33, page 3, lines 28-34, page 4, lines 16-33) (applies to instant claims 5-18) as coating for the purpose of providing improved heat resistance and water repellency properties.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane has the formula  $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$ ; said silicon compound is a silicate or an organoalkoxy silane;  $R_f$  is a  $C_{3-18}$  perfluoroalkyl group or combinations of two or more thereof; each  $R^1$  is independently one or more  $C_{1-3}$  alkyl groups;  $p$  is 2 to 4; and  $n$  is 2 to 10, wherein the surface is metal or ceramic in the coating of Diaz in order to provide improved heat resistance and water repellency properties as taught or suggested by Iwato.

With regard to claims 3-4, providing applicant's claimed thickness, absent clear and convincing evidence of an unexpected result, is obvious and well within the level of one of ordinary skill in the art through routine experimentation since it has been found that finding the workable or optimum range or value for a result effective variable is obvious (MPEP 2144). It would have been obvious to one of ordinary skill in the art to have provided that claimed thickness in order to provide improved heat resistance and water repellency properties and/or reduce costs.

#### **ANSWERS TO APPLICANT'S ARGUMENTS**

5. Applicant's arguments of 7/13/06 have been carefully considered but are deemed unpersuasive.

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Applicant's arguments with regard to the 102 rejections have been considered but are moot since the rejections have been withdrawn.

Applicant has argued that there is no motivation to combine Diaz and Iwato. However, heat resistance and water repellency are desirable properties for printing and applicant has not shown that heat resistance and water repellency are not desirable properties for printing. Applicant uses the claimed coating for alkaline and abrasive resistance.

In response to applicant's argument that the purpose of applicant's coating is for alkaline and abrasive resistance, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

With regard to Albinson, Griffen and Nakagawa none of the references were used in the rejection and none of the references discuss or disclose the specific coating of Iwato.

Applicant has argued that Iwato does not disclose a coated conduit. However, the coated conduit is disclosed by Diaz and the references are analogous because both disclose fluorosilane coatings and applicant cited both references as being related to the instant invention.

Applicant has argued that not all fluorocarbon-silane compositions are effective for use in printing. However, the fluorosilanes disclosed in Diaz and Iwato are very similar in chemical structure thus indicating that the fluorosilanes of Iwato are

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compatible with printing applications and there is no disclosure in Iwato which teaches away from there use in printing applications.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

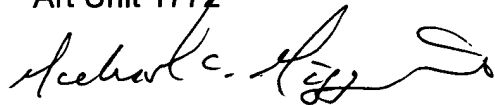
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is 571-272-1494. The examiner can normally be reached on 1:00-10:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Miggins  
Primary Examiner  
Art Unit 1772



MCM  
October 2, 2006